

epitaxially depositing a first material on a surface of a third material to form a deposited layer of the first material, the first material being a buffer material, the deposited layer of the first material having a surface with a crystallinity and a morphology;

heating, at an oxygen gas pressure of less than about 700 Torr, the surface of the deposited layer of the first material to a temperature at least about 5°C above a temperature selected from the group consisting of a deposition temperature of the layer of the first material and a crystallization temperature of the layer of the first material to form a conditioned surface having a crystallinity and a morphology, the crystallinity of the conditioned surface being substantially the same as the crystallinity of the surface of the deposited layer, and the morphology of the conditioned surface being different from the morphology of the deposited layer; and

disposing a second material on the conditioned surface.

~~154~~ (Four times amended) A method of making a multi-layer article, comprising:

epitaxially depositing a first material on a surface of a third material to form a deposited layer of the first material, the first material being a buffer material, the deposited layer of the first material having a surface with a crystallinity and a morphology;

heating the surface of the deposited layer of the first material to a temperature at least about 5°C above a temperature selected from the group consisting of a deposition temperature of the layer of the first material and a crystallization temperature of the layer of the first material to form a conditioned surface having a crystallinity and a morphology, the crystallinity of the conditioned surface being substantially the same as the crystallinity of the surface of the deposited layer, and the morphology of the conditioned surface being different from the morphology of the deposited layer, the first material being disposed on a surface of a polycrystalline material; and

disposing a second material layer on the conditioned surface.